TOAD Freeware Users
Hitting the Ground Running
Features in Commercial TOAD Not Present in Freeware TOAD
February/March 2000 60 day full TOAD Giveaway Promotion

by

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OVERVIEW

During February and March, 2000, Quest Software is giving away TOAD Commercial for a 60 day full featured trial period to demonstrate to all those TOAD Freeware users out there what features they are missing. Here is a list of features in TOAD Commercial, not present in TOAD Freeware.

To participate in the promotion, go to http://www.quest.com/toad, fill out the web page, download and install TOAD, receive a License Key via email, plug it in when starting TOAD. Use full TOAD Commercial free for 60 days as our guest.

Since TOAD was purchased by Quest Software in November, 1998, most new features developed since then have been only in the commercial version of TOAD. See http://www.quest.com/toad for details on how to purchase your commercial copy of TOAD. Since then, the same source code has been used to produce both monthly updates of freeware TOAD, available from the Toadsoft web site, http://www.toadsoft.com, and the commercial version of TOAD. Most new features are disabled in TOAD freeware by use of disabled buttons, disabled menu items, uncaptured keystrokes, etc.

MAIN ITEMS

These main items are covered in this document.

- Debugger
- SQL Modeler
- TOAD Security
- Object Editor
- Profiling
- Master Detail Browser
- Schema Differences
- Enhanced Procedure Editor
- User Editor
- Rename/Drop Column

Debugger

Purpose:

The purpose of the PL/SQL Debugger is to step through PL/SQL Procedures, Functions, Packages, or Triggers and correct any algorithm problems. TOAD provides you with single step capability, step over, step into, and step out, watching variable values as you single step, setting breakpoints with pass count execution, viewing the call stack, modifying values during the debug session, and viewing DBMS_OUTPUT results.

How to Set Up:

The license key for this 60 day promotion has the debugger module activated. No other changes are required. To verify that the Debugger module is up and running, see the "Help|About" window. It should say, "Options: Debugger, Tuner, Expert" meaning that all three modules are activated.

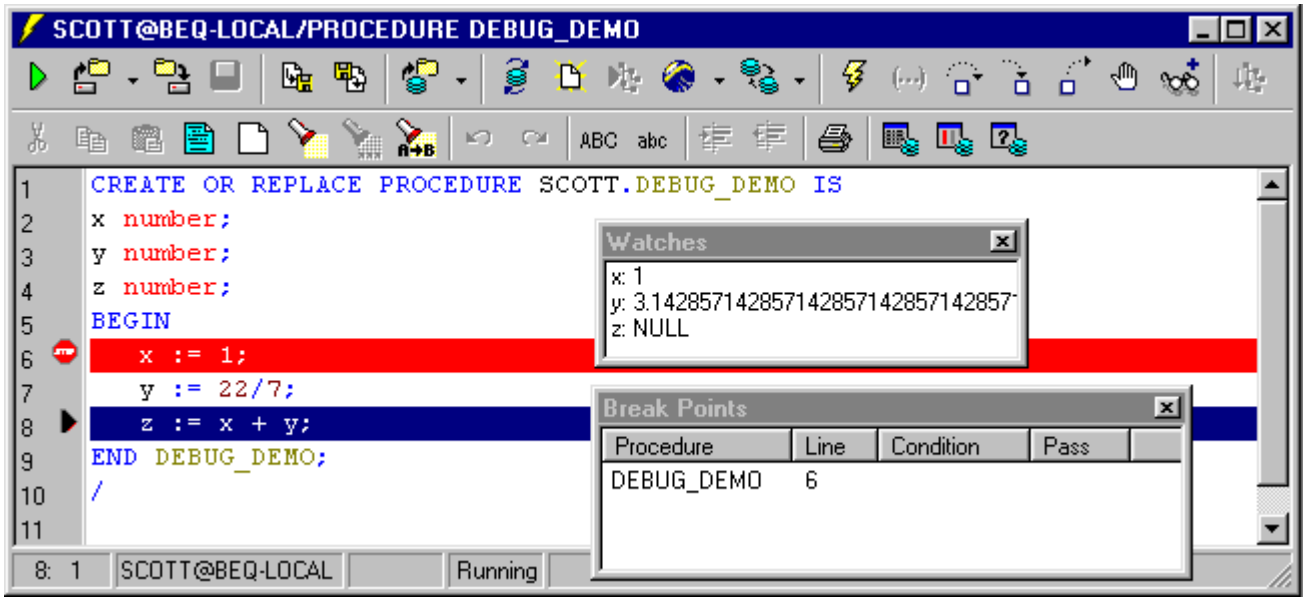
How to Use:

Start TOAD. Connect to any Oracle 8 or most Oracle 7 databases. Open the "Stored Procedure" window via either the "Database|Stored Procedure Edit" menu item or the third button on the main TOAD toolbar. Load a file containing one PL/SQL item, or load an existing object from the database. Click the compile toolbar button, or press <F9>. Press <F8> to begin single stepping. See the "Debug" menu for more options, such as setting variable watches, viewing the call stack, breakpoints window, or DBMS_OUTPUT window.

If you want to debug a package procedure or package function, click the "(…)" Select Function/Set Parameters toolbar button, which will present you with a dialog to pick a package procedure or package function to debug, and enter argument values, if your procedure or function has arguments.

If the debugger functions are not enabled, check your SYS schema for the presence of package DBMS_DEBUG. Make sure execute privilege has been granted to the user's schema.

For more information about the PL/SQL Debugger, see document, "How to use the TOAD PL/SQL Debugger", available from the http://www.toadsoft.com web site in Word and PDF formats. Also, see the online help windows via pressing <F1>.



SQL Modeler

Purpose:

The purpose of the SQL Modeler is to visually build and execute SQL statements. You can modify the where clause, add sorts, joins, graphically show joins, automatically join based on foreign keys, view on-screen Explain Plan, view Query results, etc.

How to Set Up:

There are no prerequisites for the SQL Modeler.

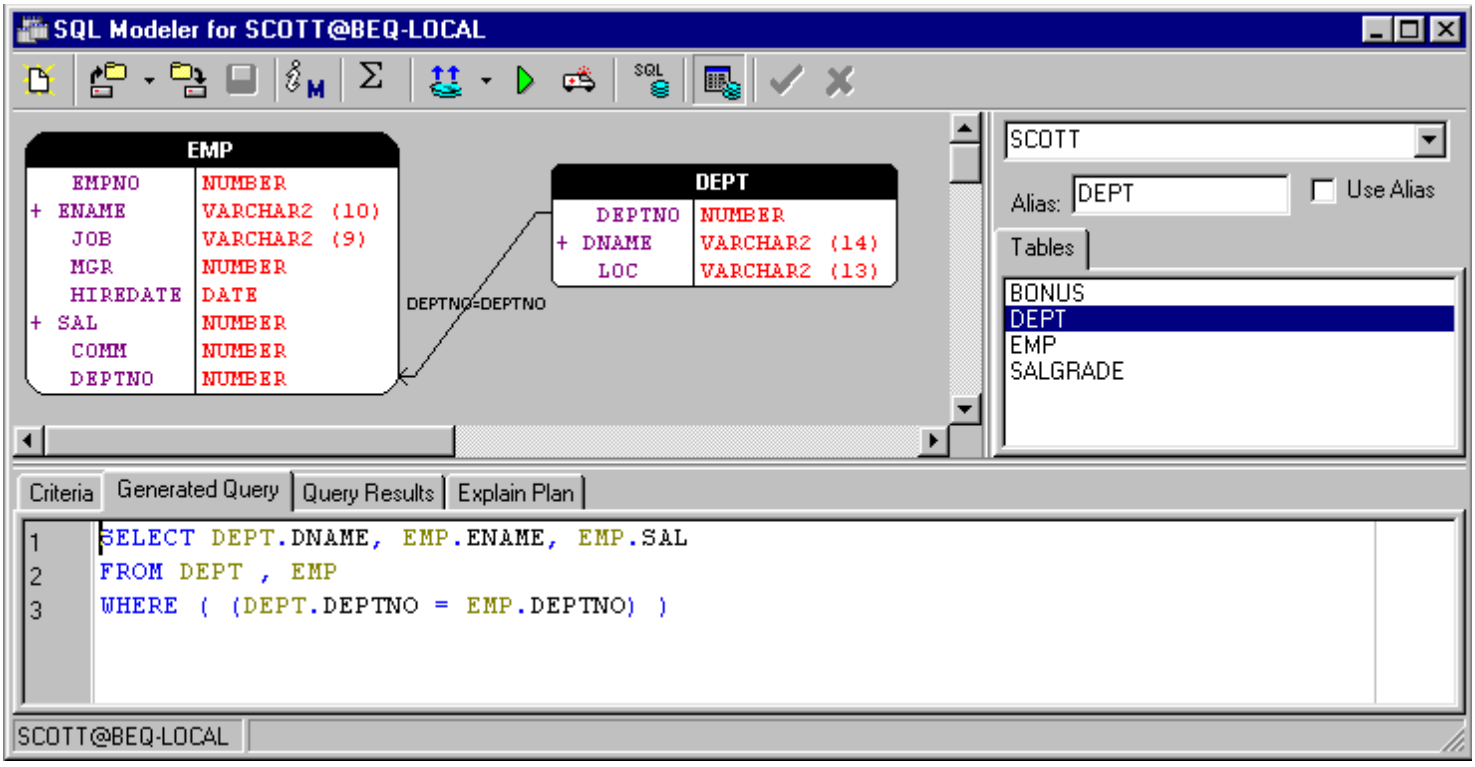
How to Use:

Select the "Database|SQL Modeler" menu item, or click the fourth button on the main TOAD toolbar. Drag and drop table names from the tables list on the right to the drawing area on the left. If there are foreign key references among multiple tables, TOAD will automatically draw connecting lines and label the line with the columns names that define the foreign key reference. Double click columns to include them in your query.

- Select any filtering criteria on the "Criteria" tab. You can also build a single column subquery by double clicking the "Condition" item, then clicking the <In SubQuery> button on the popup "Input the Where Definition" dialog.
- Click the "Generated Query" tab to see the SQL syntax of the query you just built.
- Click the "Query Results" tab and press <F9> to execute the query and view the results in the SQL Results Grid.
- In addition, if you want to further tune your query, click the "Explain Plan" tab and click the <Explain Plan> toolbar button on the SQL Modeler toolbar.

Once you are finished with your query, you can save the model to disk for restoring later, or take the resulting SQL statement to the SQL Edit window for further use. See "View|Options", SQL Modeler node for options related to the SQL Modeler window.

For more information on the SQL Modeler, press the <F1> key to activate the online help windows.



TOAD Security

Purpose:

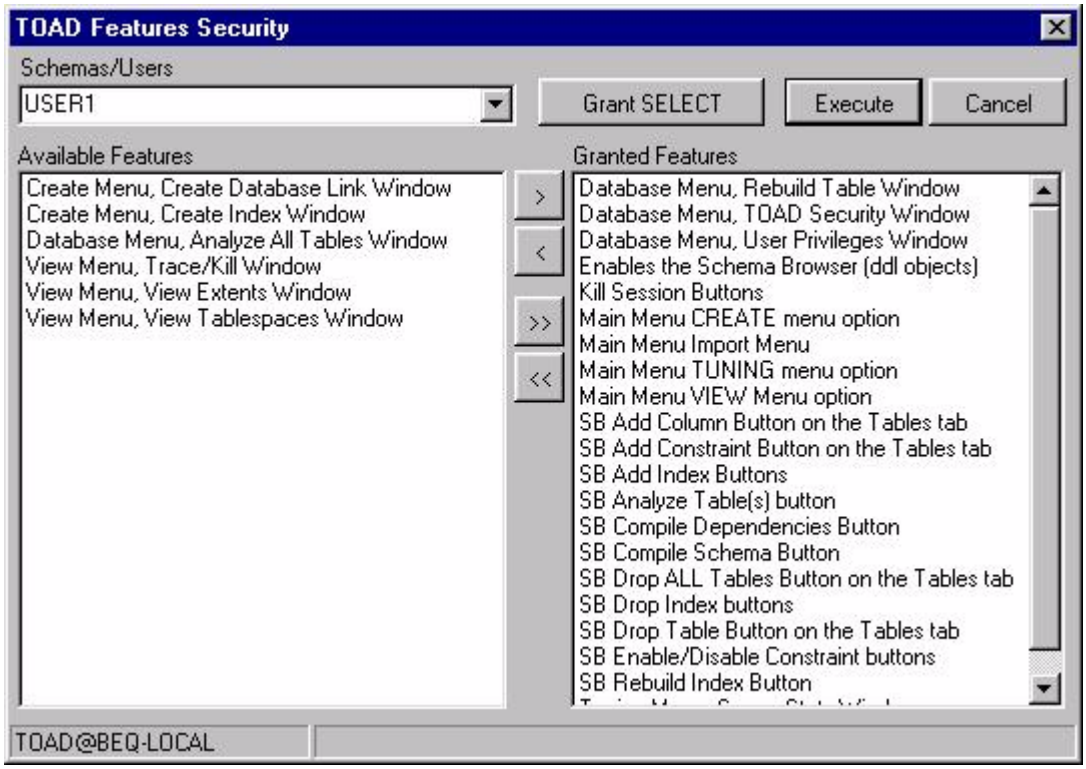
The purpose of the TOAD Security feature is to limit certain TOAD users at your facility from executing certain TOAD functions. For example, users A, B, C can be full access, but users D, E, and F cannot open the Schema Browser window. The freeware version IS controlled by the security but contains no method to set the security for users. This includes controlling the ReadOnly flag per Oracle user using table control rather than the license files.

How to Set Up:

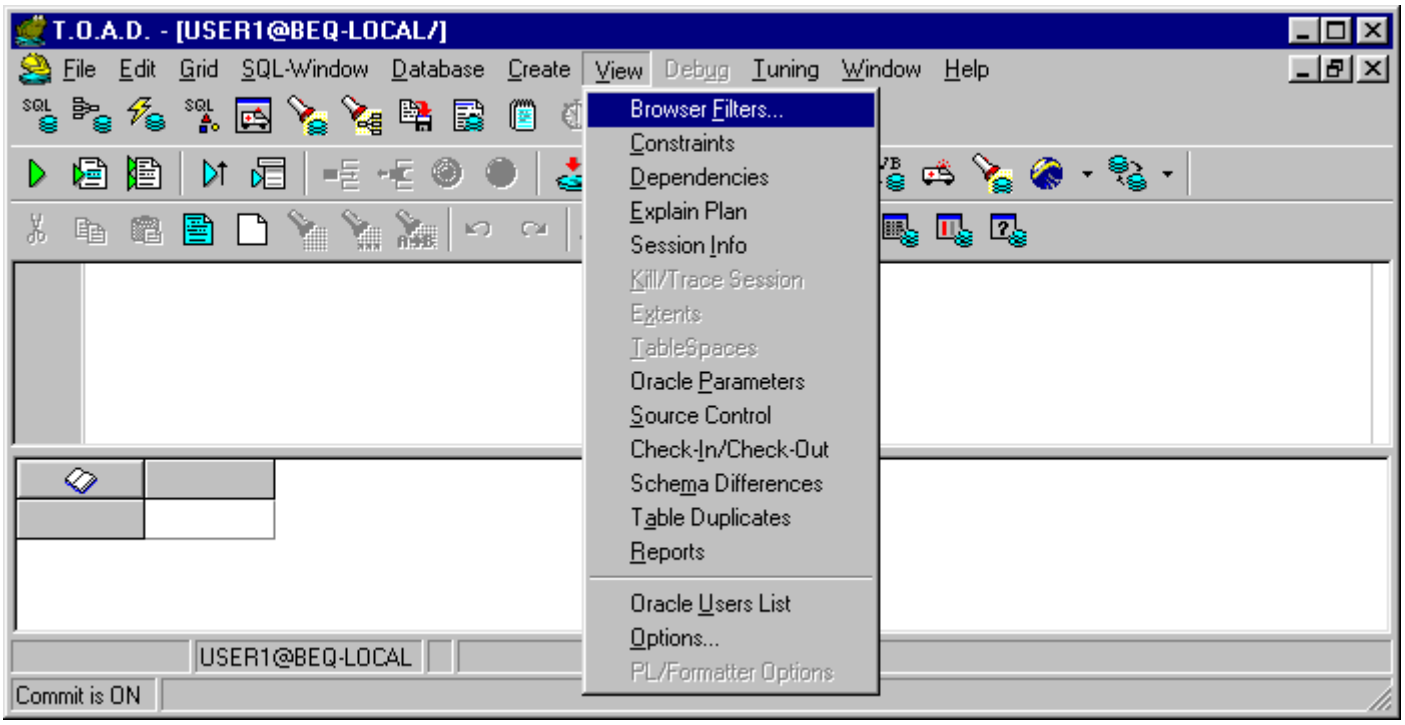
Load and execute the \TOAD\temps\TOADSecurity.sql script in the SQL Edit window in the TOAD schema. This creates 2 tables: a list of TOAD features that are security aware (TOAD_FEATURES) and a list of users and what features they can or cannot execute (TOAD_SECURITY).

How to Use:

Select menu item "Database|TOAD Security". On the "TOAD Features Security" window, select the user you want to set access from the "Schemas/Users" dropdown list. Select the features you want to grant to the list on the right. The list on the left is for TOAD features that are withheld from the user.



Once the feature selection is complete, click the <Grant SELECT> button to grant select privilege on the TOAD_SECURITY table to the users. During login of these users, if they can see the TOAD_SECURITY table, then the security option is in effect for that user. Click the <Execute> button to create the records in the TOAD_SECURITY table, then click the <Cancel> button to close the "TOAD Features Security" window. Your users are now restricted via the TOAD Security feature.



Note that, for USER1, the “Kill/Trace Session”, “Extents”, and “Tablespaces” menu items on the “View” menu are disabled. This is TOAD Security in effect.

Object Editor

Purpose:

The object editor can create and browse Oracle 8 objects.

How to Set Up:

You must attach to an Oracle 8 database for the Object Editor window to open.

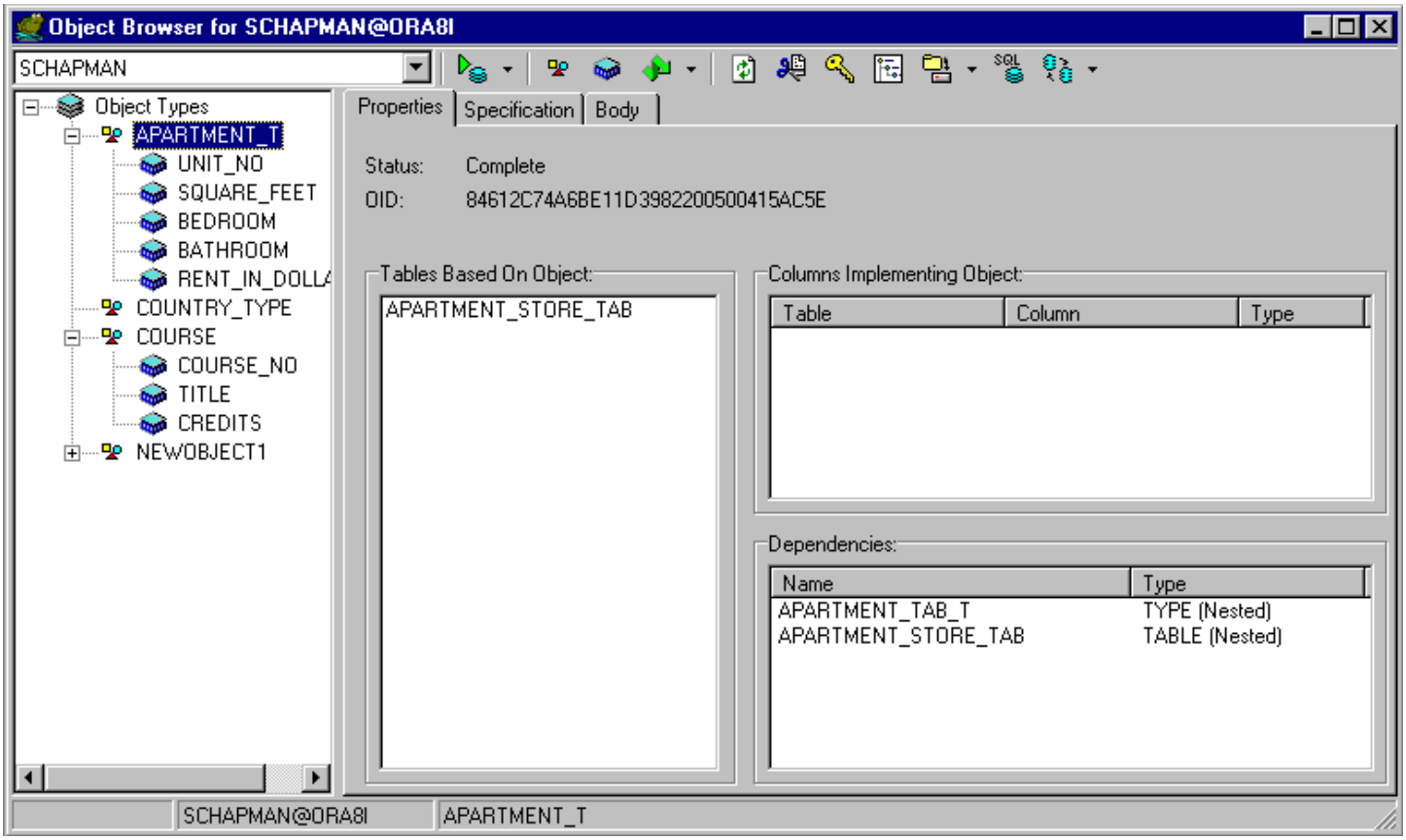
How to Use:

Invoke menu item “Database|Object Browser”.

On the left side of the window there is a hierarchical list of object types as owned by the selected schema in the dropdown list. You can browse or edit objects in other schemas, provided you have appropriate Oracle Database privileges.

Depending on the item you select in the hierarchy at left, the detail panel on the right half of the window will display the details of the selected object. When an object is selected, the right detail panel displays a three tab interface listing: Properties, Specification, and Body. When an attribute is selected, the Properties tab displays detailed information about the attribute, including data type, schema, object, length, precision, and scale. When a method is selected, the Properties tab displays a list of parameters to the method, the method type, and restrictions of the method.

See TOAD Options: Object Browser topic for information on the available options for the Object Browser window.



Profiling

Purpose:

Use this Oracle 8I function to collect statistics during runs of PL/SQL Procedures, Functions, Packages, or Triggers. The profiler will count each line of code, time how long each line of code took to execute, and graphically display the results on the "Profiler Analysis" window. Use this information to tune the bottlenecks to produce more efficient PL/SQL code.

How to Set Up:

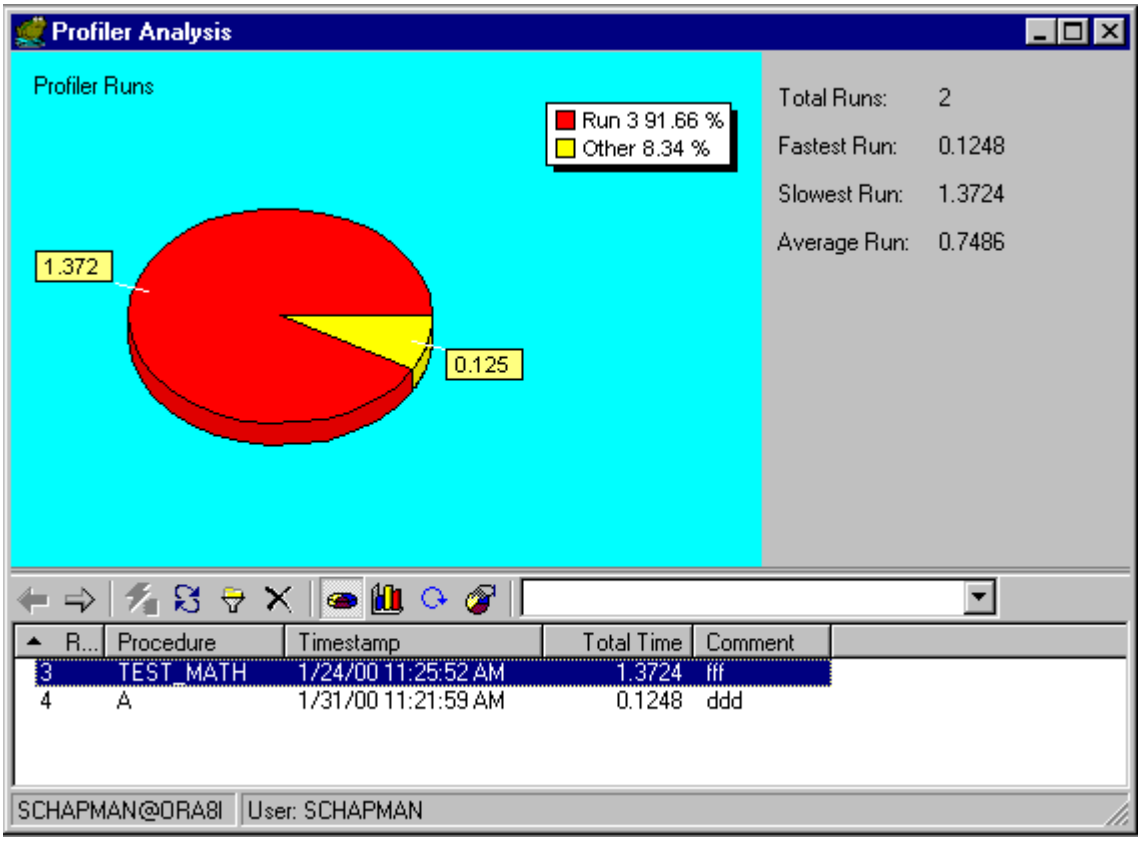
To get the profiler working, make sure you are:

- Connecting to an Oracle 8I (8.1.5.0.0) or higher database.
- Load and execute the \TOAD\temps\TOADProfiler.sql script in the SQL Edit window. NOTE: Make sure you have the Editor Option, General Options tab, Display Options drilldown, "Apply Capitalization Effects" unchecked. Otherwise the wrapped code may be changed by the capitalization effects and be rendered invalid.
- Make sure you have the DBMS_PROFILER package installed in the SYS schema, with EXECUTE privilege granted to the end users.

How to Use:

In the Schema Browser, Procs tab, select a procedure to Profile, toggle in the "PL/SQL Profiling" toolbar button on the main TOAD toolbar, execute the procedure, enter a name for later reference, e.g., "Proc A Test 1 of 3". After execution has finished, toggle off the "PL/SQL Profiling" toolbar button. Go to menu item "Database|Profiler Analysis" to see your profiling results.

See TOAD.HLP (by pressing <F1> in the Profiler Analysis window) for more information about the Profiler Analysis window.



Master Detail Browser

Purpose:

Use this function to view and/or edit master/detail table data in a database, where the tables are linked by foreign keys. This is typical of a database setup from an Entity/Relationship diagram, where one table's objects are related to another table's objects by a linking field or fields. Once the first table is selected, TOAD will populate the dropdowns from the referential constraints. As more tables are selected, other data grids and dropdowns are populated. The resulting data grids are linked based on the referential constraints.

How to Set Up:

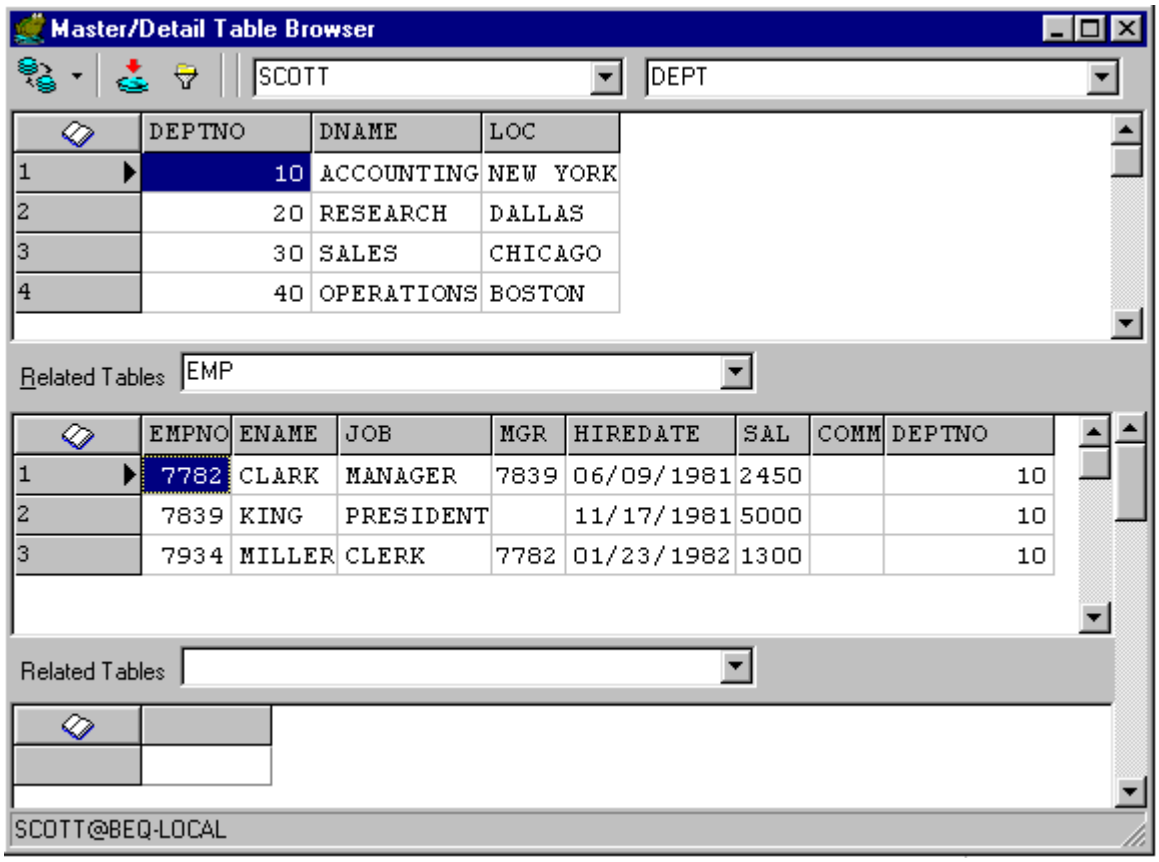
There are no setup prerequisites for using the Master/Detail browser.

How to Use:

You get to this MDI child window via the "Database|Master/Detail Browser" menu item. For example, you could start with the DEPARTMENT table, pick "EMPLOYEE" from the related tables drop-down list, select a department record, and the employee records will be displayed only for that department.

You could further drill down in the EMPLOYEE table to show employees managed by the current manager employee, by selecting "EMPLOYEE" again from Employee's related tables drop-down list. Selecting a manager employee record will now automatically display the employees managed by that manager. This is known as a circular table reference, where employee.manager_id is related to employee.employee_id.

There is currently a static limit of 5 related tables.



Schema Differences

Purpose:

Use this function to display the differences between 2 closely identical schemas, either on the same Oracle database instance, or across instances via database links.

How to Set Up:

If the schemas to compare are on different databases, then set up a database link to point from one database to the other.

How to Use:

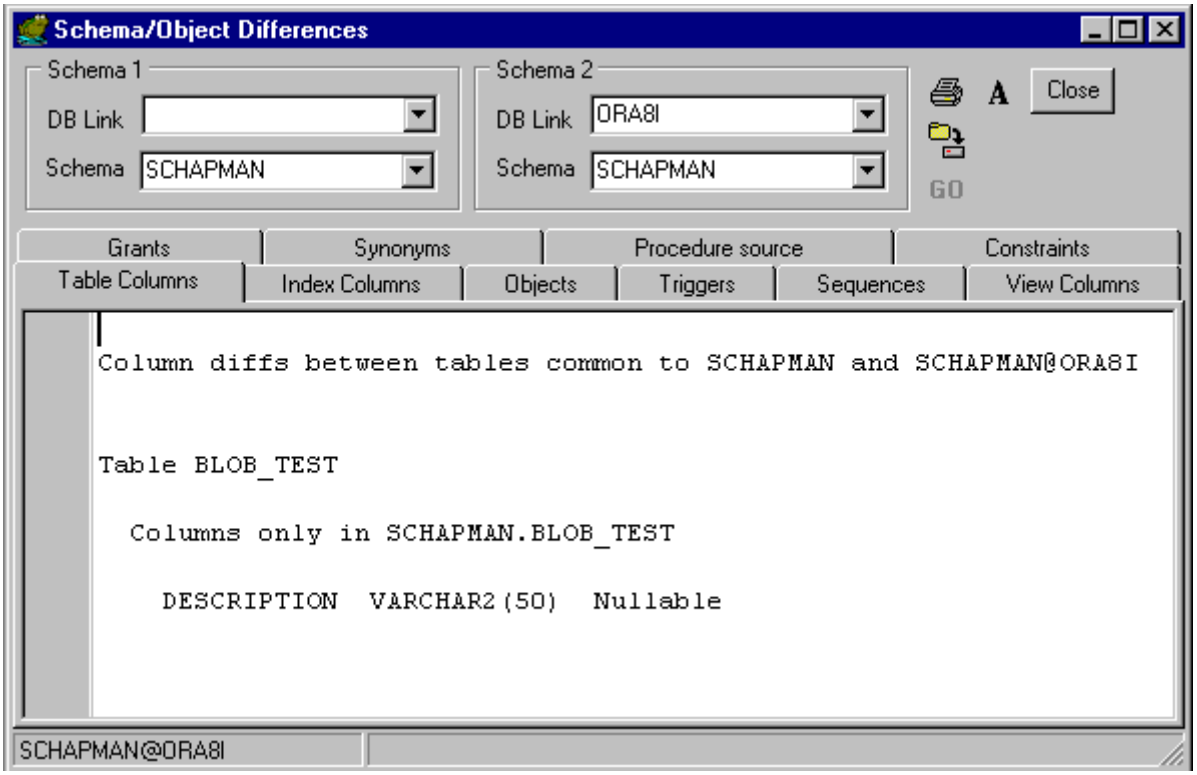
You get to this function via the "View|Schema Differences" menu item.

For schema1, select the database link or leave blank if schema1 is on the current Oracle database instance. Then pick the schema name from the drop-down list. For schema2, do the same. Click the <REFRESH> button to begin the comparison.

You can see the following differences:

- Table Columns - if there table columns in one table but not the other, they will be displayed. If the datatype, length, NULL vs. NOT NULL, etc. are different, then both columns will be displayed so that you can compare the values.
- Index Columns
- Objects - will list objects (functions, indexes, packages, procedures, sequences, synonyms, tables, triggers, views, etc.) found in schema1 not in schema2 and vice versa.
- Triggers
- Sequences
- View Columns
- Grants
- Synonyms
- Procedure Source - will list differences in code as well as one found in schema1 not in schema2 and vice versa.
- Constraints

Caution: the queries are slow if you are accessing a database over a slow link or modem.



Enhanced SQL Editor

Purpose:

There are several features in the SQL editor, not available in TOAD freeware.

How to Set Up:

There are no prerequisites to take advantage of the new features.

How to Use:

The new editor features include:

- Older Clipboard keys (Shift-Ins, Ctrl-Ins) are now automatically supported
- Ability to export the SQL Results Grid as a Flat File, e.g.,

```
1     1      dfghdfg       LIKES        HARDCODED
2     2      sdfsd sdf     HOBBY        HARDCODED
3     3      ggg           hhh          HARDCODED
4     23     sdfsf                      HARDCODED
```

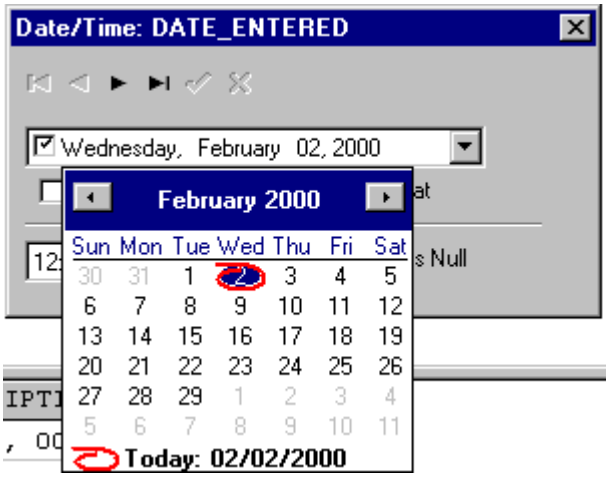
- Ability to look up and retrieve procedure arguments as you type:

```
Proc_name <CTRL>D returns: [Proc_name (PREFIX varchar2 IN)]
```

- Ability to load text into a favorite external editor
- Syntax Highlighting SYS view names
- Auto complete/popup list of tablenames as you type
- Substitution variables are now supported in the SQL Editor. Entering an ampersand char in a query will prompt you for the string to substitute. E.g., [select * from dual where dummy = &foo]

The new SQL Results Grid features include:

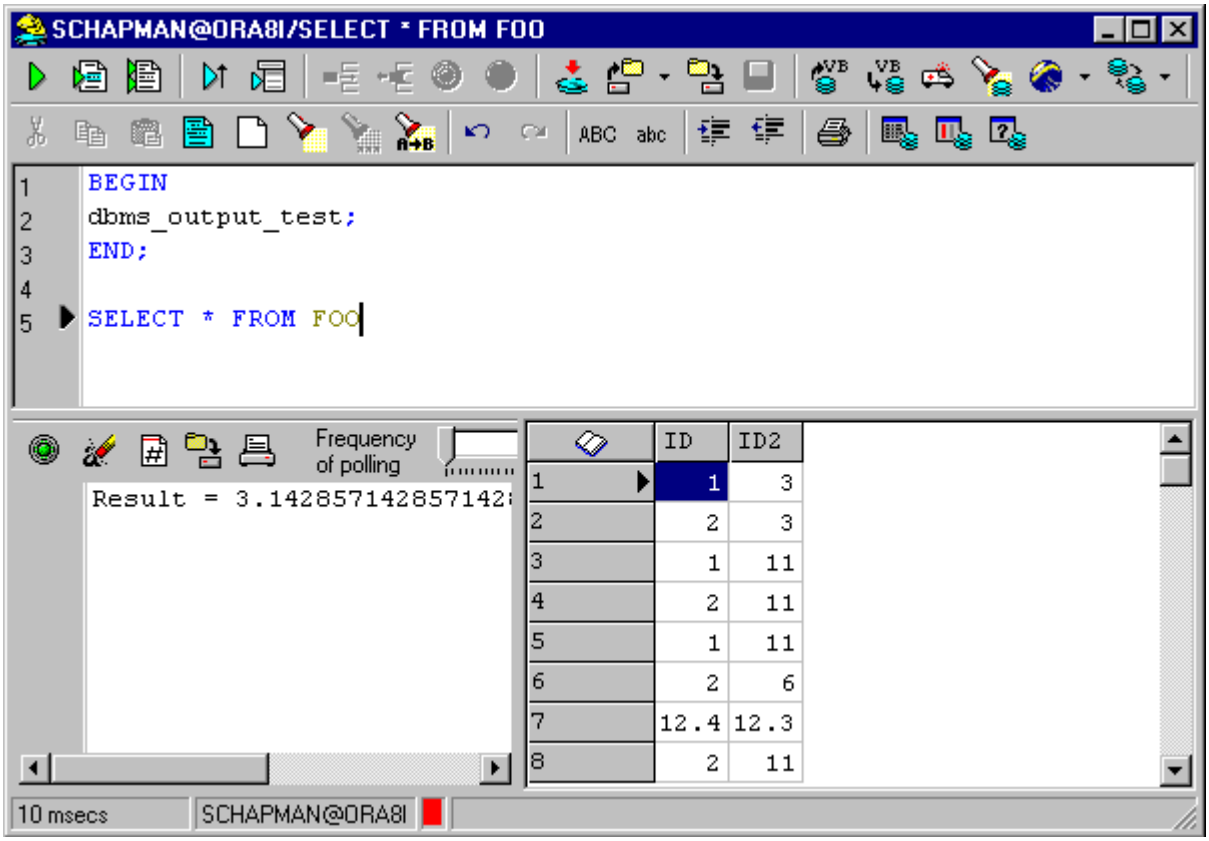
- Find Data
- Copy Row
- Record Count function
- Fixed/Anchored Columns, which are locked to the left-side of the grid even when you scroll the grid to the right
- Row Highlighting
- Grid Date Input popup window for picking dates from a calendar dialog
- Select Columns dialog to select or unselect columns after they are queried



The SQL Edit toolbar contains a button for displaying an embedded DBMS Output window to the left of the SQL Results Grid.

TOAD Options include:

- Saving only SQL statements that are valid
- Saving SQL statements before execution
- Prompting to save editor contents before closing the editor
- Limiting to one SQL Edit window per database connection
- Displaying {null} in the data grid for Null columns
- Trimming string data before posting to the database
- Confirming Row Deletions
- Treating Underbar as part of the object names
- Displaying column dropdown list after object name and period
- Allowing RTF for copying to/from the clipboard



Enhanced Procedure Editor

Purpose:

There are several features in the Procedure editor, not available in TOAD freeware.

How to Set Up:

There are no prerequisites to take advantage of the new features.

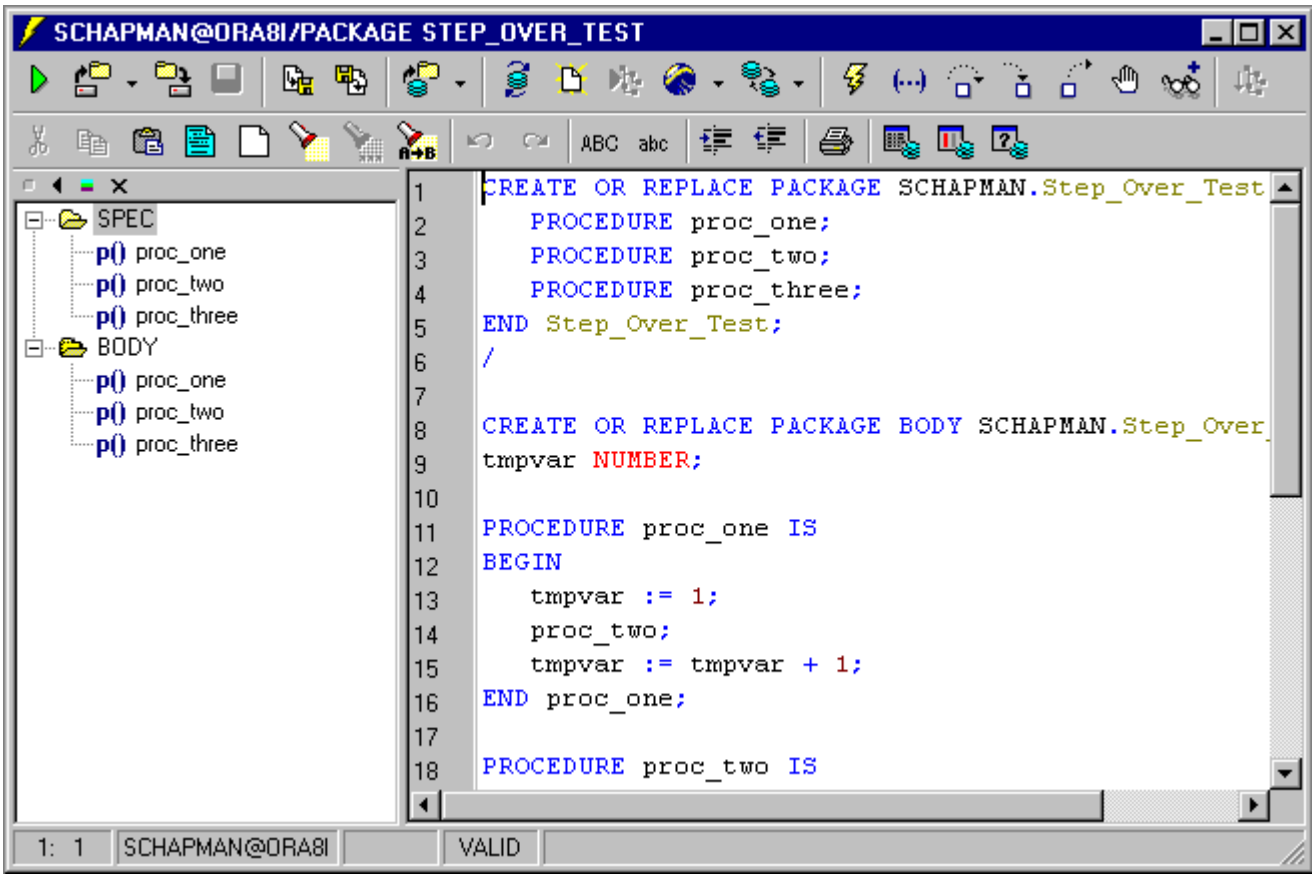
How to Use:

The new editor features include:

- "Reload Object From Database" toolbar button, which reloads the source from the database or from a file but first prompts if the text has been modified.
- "Compile Dependencies" toolbar button, which recompiles objects that call your procedure
- Added filtering to the Select Object Window
- Navigator panel on the left side of the window that displays package procedures and functions in a hierarchical view. Selecting an item in the navigator repositions the cursor in the editor to the selected package procedure.

TOAD Options include:

- Searching for Dependent Objects following a compile
- Substituting a username in the New Procedure code templates
- Notification when a compile process is complete
- Limiting TOAD to one Procedure Edit window per database connection
- Reading New Procedure templates from the Network TOAD install



New Offline Editor Window

Purpose:

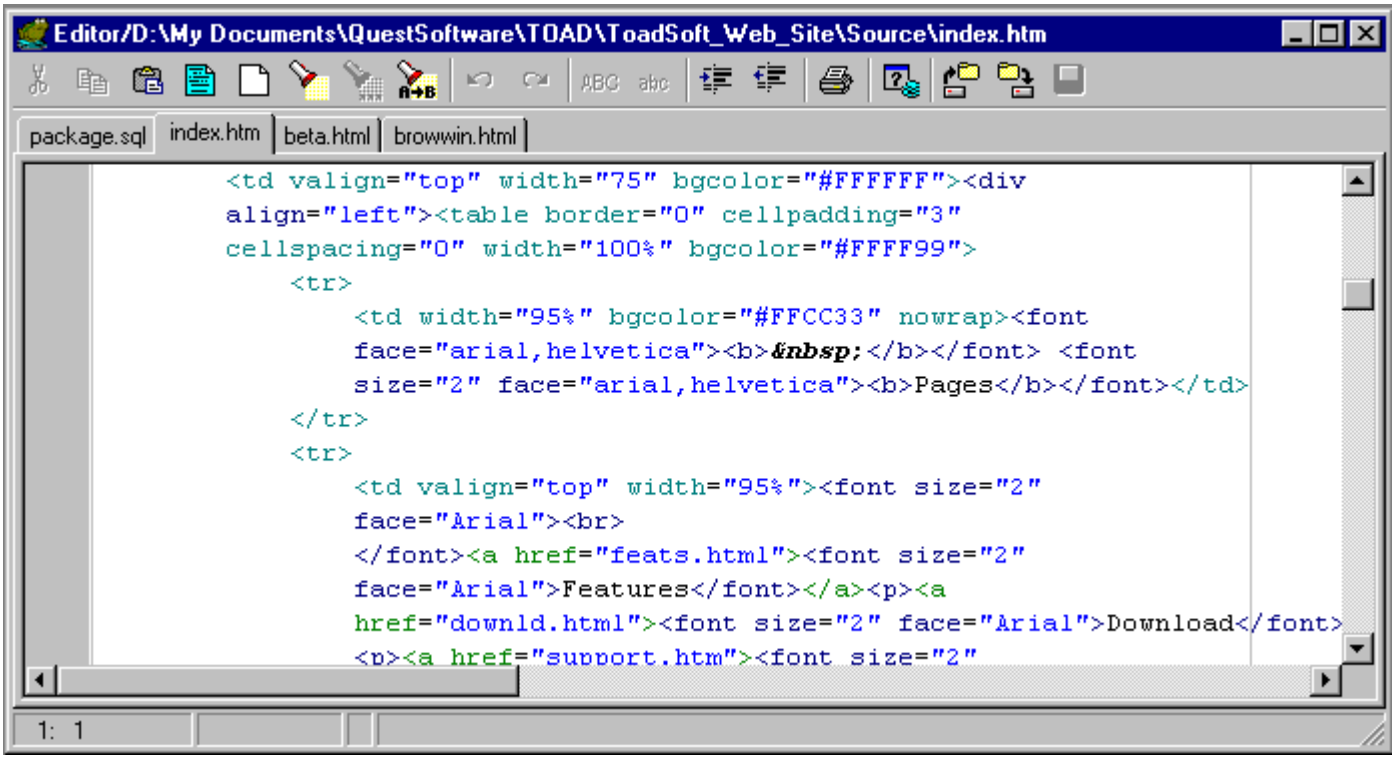
Allows editing a file without a connection to a database, such as a detached laptop. File formats include HTML, Java, Ini, PLSQL, and plain Text.

How to Set Up:

There are no prerequisites to take advantage of the new window. Code completion templates, key assignments, editor options, and auto substitutions are stored and retrieved by file type. So you can set up code completion templates for editing a java file in java.dci, and different code completion templates for editing a HTML file in html.dci.

How to Use:

Click the "Text Editor Window" toolbar button on the main TOAD toolbar. Open file, edit, save as usual. Interface is multi-tabbed, where there is one file open per tab. Syntax highlighting is still supported in the offline editor window.



User Editor

Purpose:

Creates new users, assigning system privileges, roles, and object grants. You can create a new user as a complete copy of an existing user.

How to Set Up:

There are no prerequisites for getting the User Editor working.

How to Use:

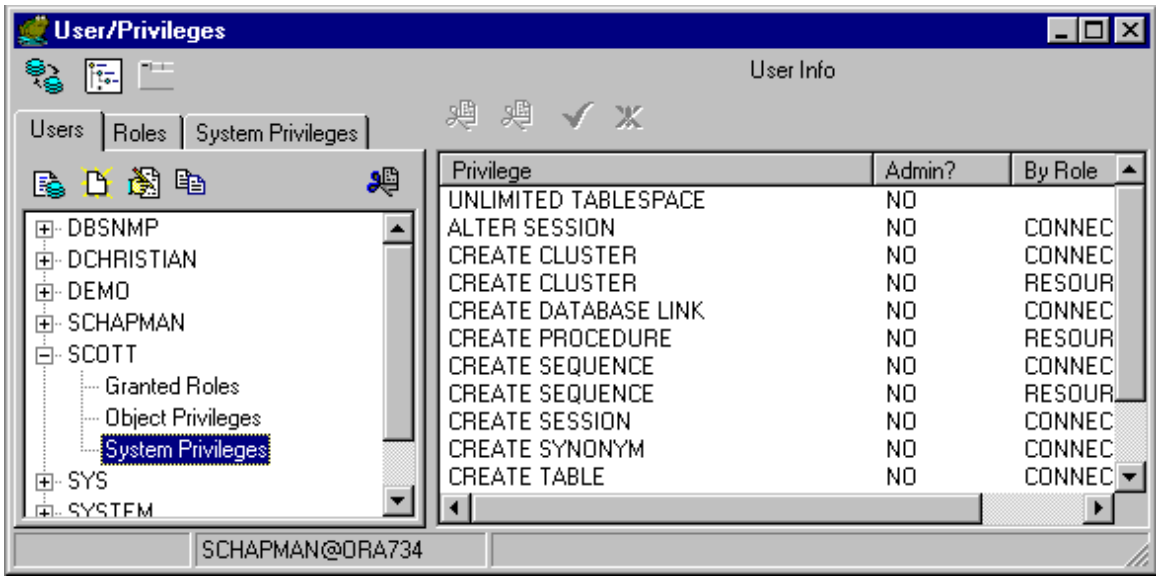
Go to the "Database|Privileges" menu item.

From the Users tab you can:

- Create a script to recreate the selected user, which includes the "Create User" command, and all the necessary "Grant" commands to recreate the user. The script is copied to the clipboard.
- Create a new user, which will open the Create User window, where you can select the username, password, tablespace, profile settings, system privileges, and roles.
- Modify the selected user, by changing user settings, or adding more system privileges and/or roles.
- Create a new user as an exact copy of the selected user.
- Drop an existing user.
- Revoke a single or multiple Role, Object Privilege, or System Privilege from a user.

From the Roles tab you can:

- Drop a role.
- Revoke a single or multiple System Privileges from a role.
- Revoke a user from the selected role.
- Revoke a single or multiple object privilege from a role.
- Revoke a role from a role.



Rename/Drop Column

Purpose:

Rebuilds a table, optionally dropping columns, reordering columns, renaming columns, or changing any of the characteristics of the table.

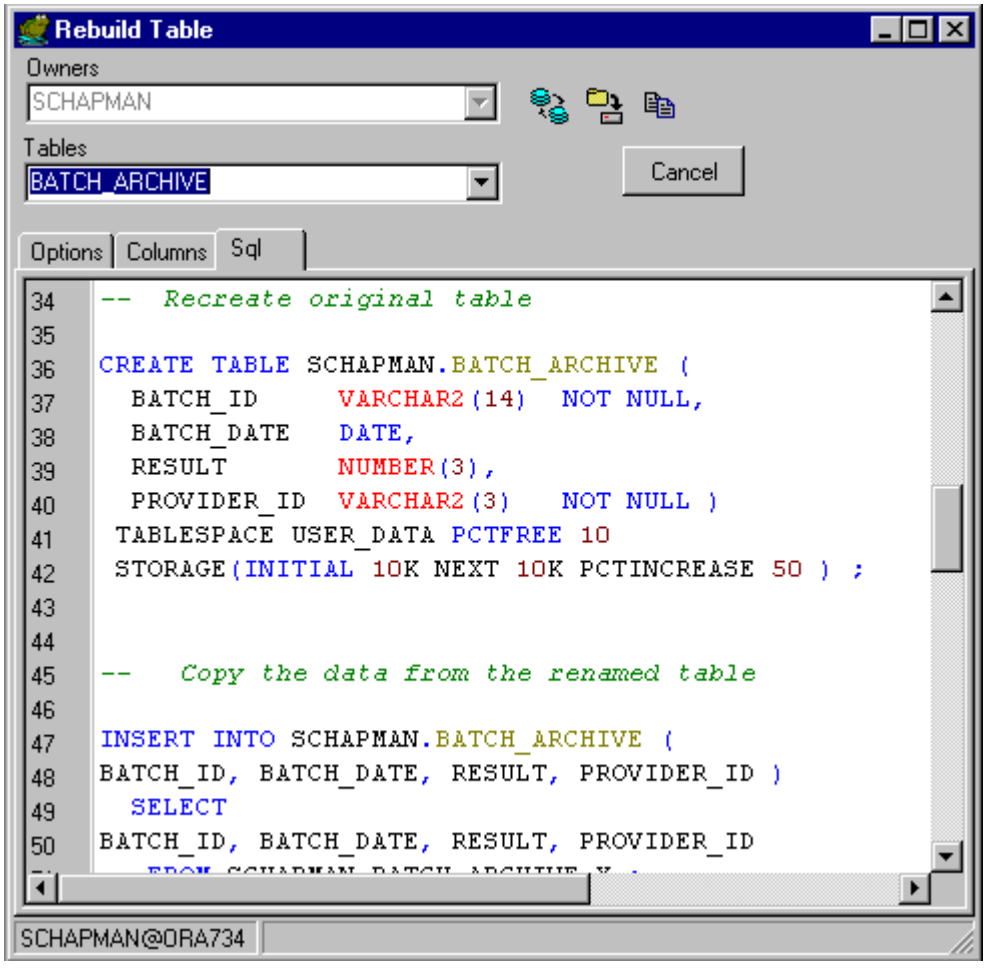
How to Set Up:

There are no prerequisites for getting the Rebuild Table window working.

How to Use:

Go to menu item "Database|Rebuild Table". Select a table to rebuild (must be in the current schema). Select the new storage parameters. On the Columns tab, select any columns to drop or rename. On the SQL tab, you can copy and further edit the resulting script for complete customization.

TOAD creates a script to disable (and remember) current table constraints, renames the current table, creates the new table with new storage criteria, copies the data from old table to new table, then reapplies indexes and constraints, and recompiles dependent objects that have been made invalid due to the change.



Schema Browser Enhancements

Database Links object tab
Java object tab

Tables tab:

- Truncate table toolbar button
- Add Constraint toolbar button
- Analyze table toolbar button
- Add Public Synonym for selected table toolbar button
- Used By detail tab
- Bitmaps displayed next to tables to indicate type of table

  Columns tab:

  - Triangles to indicate Primary Key columns

Indexes tab:

- Bitmaps displayed next to indexes to indicate type of index, bitmap or unique
- Analyze Index toolbar button

Procs tab:

- Compile Dependencies toolbar button
- Execute toolbar button
- Text Find dialog enabled over proc source detail panel

Triggers tab:

- Compile Trigger toolbar button

Sequences tab:

- Privileges toolbar button
- Add Public Synonym for selected sequence toolbar button

TOAD Options include:

- Limiting TOAD to one Schema Browser window per database connection
- Using cache cursors for queries to populate lists on the browser
- Auto expanding Dependency Trees
- Auto Sizing list view columns
- Showing table names following the trigger names
- Saving and restoring the data grid layouts
- Saving and restoring the browser filters

ADDITIONAL FUNCTIONALITY NOT IN FREEWARE TOAD

Here is a list of other functionality in TOAD Commercial, not in TOAD freeware.

Window	Functionality
Login	"Force SQL*Net (ignore Net8)", "SQL*Net Compatible Net8", and "Use Last Oracle Home" checkbox options.
Source Control	Using TOAD for source control, automatically checking out objects before compile.
Export Synonyms	New Export Synonyms window with Export Public for Selected Schema or Export Synonyms Owned by Selected Schema. Also adds the DROP clause by option.
Export Sequences	Allows export of sequences.
Source File Import	New Source Import window for importing and compiling multiple source code files. Following execution, the post-compilation status is displayed as are the errors for each source file (as you click on individual filenames). There is also a button to load the selected file in a Procedure Editor. The file selection dialog is multi-select and uses the file extensions defined in the user options. Also, there is a function to show what object is contained in each source file.
Analyze All Tables	Database menu item to analyze all tables in a given schema.
Create Constraint	New Create Constraint window on the Create menu and the Browser tables list also. Creates Primary Key, Referential, and Check constraints.
Create Synonym	Creates a synonym to point to another object.
Create User	Creates a new user.
Table Duplicates	Views rows with duplicate values.
Schema Differences	Procedure Source and Constraints tabs added. Also, options to print, save results to file, and set font.
KB's	Integration with Revealnet's Knowledge Bases

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